



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
-----------------	-------------	----------------------	---------------------	------------------

09/846,565

04/27/2001

R. Edward Winters

4126

7590
Joanne M. Martin
40 North Spring Street
Concord, NH 03301

12/12/2007

EXAMINER

MILLER, CHERYL L

ART UNIT

PAPER NUMBER

3738

MAIL DATE

DELIVERY MODE

12/12/2007

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

CT

Office Action Summary	Application No.	Applicant(s)	
	09/846,565	WINTERS, R. EDWARD	
	Examiner	Art Unit	
	Cheryl Miller	3738	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 05 October 2007.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-13 and 15-18 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-13 and 15-18 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Continued Examination Under 37 CFR 1.114

A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on August 15, 2007 has been entered.

Response to Arguments

Applicant's arguments with respect to claims 1-18 have been considered but are moot in view of the new ground(s) of rejection.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1, 3, 4, 5, 7, 9, 10, 12, 13, 15, 17, and 18 are rejected under 35 U.S.C. 102(b) as being anticipated by Tekulve (US 5,797,953). Tekulve discloses an expandable hoop support (10) comprising a preformed hoop composed of a material disposed to form a first coil (seen in figs.2, 4) and a second coil (15; seen in fig.1) having memory properties and having a rounded or ball end (29; col.4, lines 52-55) and a cylindrical delivery means (36) for constraining the second coil into a linear configuration (fig.2), wherein when the delivery means (36) is removed, the hoop will reconfigure into the secondary coil (fig.3), the outer diameter *configured* to be larger

than the target vessel size (a diameter of at least some of the coil loops are shown to be larger than the diameter of the vessel in figs. 1, 3, thus a diameter is larger than the target site diameter; further, the device is capable of being placed in a variety of sized vessels, large or small, when in a smaller vessel, the device will have a larger diameter, this is intended use language and such a device is capable of placement into a vessel of such size requirements). Tekulve discloses the delivery means (36) to be a delivery tube that fits over the coil (see fig. 2, 3). Tekulve's implant may be considered to be a stent. Tekulve also discloses a method of opening an artery by determining the size and inserting the above device (see figs). Tekulve has shown in the figures, non-uniform spacing, the spacing configured to allow blood flow there through (depending upon the placement by the surgeon which is intended use).

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1-10, 12-13, and 15-18 are rejected under 35 U.S.C. 103(a) as being unpatentable over Brown et al. (US 6,093,199, cited previously) in view of Jones (US 6,811,560 B2). Brown discloses an expandable hoop support (10; all figs.) and procedure for opening an artery substantially as claimed. Brown discloses a preformed hoop stent (10) composed of a material formed into a first coil (not shown in figs. however disclosed at col. 4, lines 48-50; primary coil), the first coil formed into a second coil (secondary coil; col. 4, lines 50-53; shown in figs.) and the

coil having memory (fig. 1A; col. 3, lines 12-19) and a cylindrical delivery means to constrain coil into a linear configuration (col. 8, lines 62-65), the delivery means being either a rod fit within the coil (over a guidewire, col. 3, lines 21-24; col. 4, lines 65-67) or a tube fit over the coil (through a catheter, col. 3, lines 21-24; col. 8, lines 62-65), and wherein when delivery means is removed in an artery (or flexible tube, as claimed in claim 1 and 8), coil reconfigures into an original preformed configuration (col. 3, lines 21-27; col. 4, lines 48-67; col. 8, line 62-col. 9, line 16). Brown's stent is adapted to hold open the vessel (see all figs as the stent anchors in the vessel, thus inherently has a larger diameter than the vessel such that it exerts outward force and stays in place). Brown discloses the stent to have openings (spaces between hoops 62, see fig. 1 for example) that allow some flow of blood into a vessel opening or branch vessel (see fig. 1, 7; col. 3, lines 40-44; col. 5, lines 5-10; col. 10, lines 49-62). Brown discloses the expandable hoop and method substantially as claimed however does not disclose the hoop to having a rounded or ball end. Jones teaches in the same field of hoop stent (14), a coil having a rounded end (32) for the purpose of reducing trauma in the vessel (col. 2, lines 54-56). It would have been obvious to one having ordinary skill in the art at the time the invention was made to combine Brown's hoop stent with Jones teaching of rounded ends of hoop stents in order to provide a more atraumatic hoop stent which decreases the chances of injuring the surrounding vessels. Rounding ends and edges of hoops are well known in the medical art for the purpose of reducing trauma to the patient and also for providing a catch mechanism for delivery systems, and the following are cited as evidence: Samson et al. US 6,254,592 B1, see rounded ends 112; Tekulve US 5,797,953 see rounded ends 29, col. 4, lines 52-55; Bishop US 2003/0187498 A1, teaches rounding all exposed edges on stents, P0027, P0034.

Claims 1, 3-5, 7-13, 15, and 17-18 are rejected under 35 U.S.C. 103(a) as being unpatentable over Farzin-Nia (US 6,818,076 B1, cited previously) in view of Jones et al. (US 6,811,560 B2). Farzin-Nia discloses an expandable hoop support (fig.2) and procedure for opening an artery substantially as claimed. Farzin-Nia discloses a preformed hoop stent (col.3, lines 47-50; col.2, line 4) composed of a first coil (forming strand 10; primary coil; fig.1) the first coil forming a second coil (secondary coil; windings 14; fig.2) and the coil having memory (col.2, lines 49-55) and a cylindrical delivery means to constrain coil into a linear configuration (catheter/guidewire; col.3, lines 17-25), and wherein when delivery means is removed in an artery (or flexible tube, as claimed in claim 1 and 8), coil reconfigures into an original preformed configuration. Farzin-Nia's stent is adapted to hold open the vessel (col.3, lines 47-50). Farzin-Nia discloses an opening or irregular spacing of the secondary coil (see fig.3). These spacings *adapted* for placement near an opening in the vessel. Farzin-Nia discloses a multi-filar wire (3 wires shown in fig.1, 2). Farzin-Nia discloses the expandable hoop and method substantially as claimed however does not disclose the hoop to having a rounded or ball ends. Jones teaches in the same field of hoop stent (14), a coil having a rounded end (32) for the purpose of reducing trauma in the vessel (col.2, lines 54-56). It would have been obvious to one having ordinary skill in the art at the time the invention was made to combine Farzin-Nia's hoop stent with Jones teaching of rounded ends of hoop stents in order to provide a more atraumatic hoop stent which decreases the chances of injuring the surrounding vessels. Rounding ends and edges of hoops are well known in the medical art for the purpose of reducing trauma to the patient and also for providing a catch mechanism for delivery systems, and the following are cited as evidence: Samson et al. US 6,254,592 B1, see rounded ends 112; Tekulve US 5,797,953 see rounded ends

Application/Control Number:
09/846,565
Art Unit: 3738

Page 6

29, col.4, lines 52-55; Bishop US 2003/0187498 A1, teaches rounding all exposed edges on stents, P0027, P0034.

Conclusion


The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Cheryl Miller whose telephone number is (571) 272-4755. The examiner can normally be reached on Monday-Friday 7:30am-5:00pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Corrine McDermott can be reached on (571) 272-4755. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Cheryl Miller/


CORRINE McDERMOTT
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 3700